

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Currently Amended) A method for retrieving and editing the data structure of a Hypertext Markup Language (HTML) UI (User Interface) Control in a Client-Server networked environment, the method comprising the steps of:

loading at least one Web page at a client Web browser, said Web browser provided with a Client-Side Data Manager and a Client-Side Proxy;

displaying, a HTML UI Control in ~~[[a]]~~ the Web page within an application window at a client device;

upon detecting an event at the browser, invoking the Client-Side Data Manager to evaluate the event;

responsive to the event, generating a first request by making a first remote procedure call from the Client-Side Data Manager to the Client-Side Proxy to generate a first universal resource locator (URL);

building an Hypertext Transfer Protocol (HTTP) request for the first URL using the browser;

transmitting, to a first server, ~~[[an]]~~ the HTTP request directed to a Server-Side Proxy;

invoking, at said first server at a Server-Side Data Query Engine ,~~or a second server~~, program code based on said HTTP request to query an information system;
[[and]]

receiving, at said application window from said Server-Side Proxy, an HTTP response containing the results of said query;

unpacking said HTTP response at said browser using said Client-Side Proxy;

executing a callback function at the Client-Side Proxy to make said HTTP response available to the Client-Side Data Manager; and

causing the Client-Side Data Manager to interact with the HTML UI Control based on the results of said query contained in the HTTP response;

wherein [[the]] said transmitting and said receiving actions are accomplished without refreshing said Web page displaying said HTML UI Control.

2. (Original) A method as defined in claim 1, wherein said HTML UI Control is a form.
3. (Original) A method as defined in claim 1, wherein said HTML UI Control is a grid.
4. (Original) A method as defined in claim 1, wherein said HTML UI Control is a listview.
5. (Original) A method as defined in claim 1, wherein said HTML UI Control is a menu.
6. (Original) A method as defined in claim 1, wherein said HTML UI Control is a treeview.

7. (Original) A method as defined in claim 1, wherein said HTML UI Control displays at least a portion of a list of items.
8. (Original) A method as defined in claim 1, wherein said Web page is contained in a HTML frame.
9. (Original) A method as defined in claim 1, wherein said Web page contains a HTML inline frame.
10. (Original) A method as defined in claim 1, wherein said application window is a Web browser window.
11. (Original) A method as defined in claim 1, wherein said Web page has means for storing the data structure of said HTML UI Control in a JavaScript object.
12. (Original) A method as defined in claim 11, wherein said JavaScript object is a multidimensional array.
13. (Original) A method as defined in claim 1, wherein said transmitting and said receiving actions are accomplished without the use of Web browser plugins.
14. (Original) A method as defined in claim 1, wherein the transmission of said HTTP request and response is accomplished through a non-persistent HTTP connection.

15. (Original) A method as defined in claim 1, wherein said information system is a database.
16. (Original) A method as defined in claim 1, wherein said information system is a network domain.
17. (Original) A method as defined in claim 1, wherein said information system is a file system.
18. (Original) A method as defined in claim 1, wherein said results are evaluated by a JavaScript function accessible by said Web page.
19. (Currently Amended) A method as defined in claim 18, wherein the evaluation of said JavaScript function results in a visual alteration of the displayed HTML UI Control. ~~claims 20-40 intentionally left blank~~

[[41]] 20. (Currently Amended) A method for retrieving and editing the data structure [[of]] associated with a Hypertext Markup Language (HTML) UI (User Interface) in a Client-Server networked environment comprising the steps of:

displaying, an HTML UI Control with an associated data structure in a Web page within an application window at a client Web browser device, said Web browser provided with a Client-Side Date Manager and a Client-Side Proxy, said Web page having means for storing the data associated with the data structure of said HTML UI Control;

upon detecting an event at the browser, invoking the Client-Side Data Manager to evaluate the event;

on said event being directed to editing the data structure, sending a first request to execute a remote procedure call (RPC) from said Client-Side Data Manager to said Client-Side Proxy;

executing said RPC over Hypertext Transfer Protocol (HTTP) to generate an HTTP request, said RPC being executed by one of an HTTP "GET" request through the HTML <script> tag and an HTTP "POST" request through the HTML <form> tag;

transmitting, to a first server, from said Client-Side Proxy to a Server-Side Proxy, said [[an]] HTTP request containing at least one function name and at least one parameter, wherein [[the]] a program code of said at least one function name[[s]] resides at a Server-Side Data Query Engine;

invoking at said first server or second server, causing said Server-Side Proxy to invoke said program code at said Server-Side Data Query Engine to query an information system based on the evaluation of said at least one function name[[s]] and said at least one parameter[[s]] and send an HTTP response to said Server-Side Proxy;

receiving, at said Client-Side Proxy in said application window, [[an]] the HTTP response containing results of the execution of said query upon said information system, said HTTP response received through one of an HTML <script> tag and an HTML <iframe> tag corresponding to said HTML "GET" and said HTML "POST" request, respectively;

unpacking the HTTP response at said Client-Side Proxy and passing said results to said Client-Side Data Manager; and

editing said data structure using said results;

wherein the said transmitting and said receiving actions are accomplished without refreshing said Web page displaying said HTML UI Control with the data structure.

[[42]] 21. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control is a form.

[[43]] 22. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control is a grid.

[[44]] 23. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control is a listview.

[[45]] 24. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control is a menu.

[[46]] 25. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control is a treeview.

[[47]] 26. (Currently Amended) A method as defined in claim [[41]] 20, wherein said HTML UI Control displays at least a portion of a list of items.

[[48]] 27. (Currently Amended) A method as defined in claim [[41]] 20, wherein said Web page is contained in an HTML frame.

[[49]] 28. (Currently Amended) A method as defined in claim [[41]] 20, wherein said Web page contains an HTML inline frame.

[[50]] 29. (Currently Amended) A method as defined in claim [[41]] 20, wherein said application window is a Web browser window.

[[51]] 30. (Currently Amended) A method as defined in claim [[41]] 20, wherein said data structure is stored in a JavaScript object.

[[52]] 31. (Currently Amended) A method as defined in claim [[51]] 30, wherein said JavaScript object is a multidimensional array.

[[53]] 32. (Currently Amended) A method as defined in claim [[41]] 20, wherein said transmitting and said receiving actions are accomplished without the use of Web browser plugins.

[[54]] 33. (Currently Amended) A method as defined in claim [[41]] 20, wherein the transmission of said HTTP request and response is accomplished through a non-persistent HTTP connection.

[[55]] 34. (Currently Amended) A method as defined in claim [[41]] 20, wherein said information system is a database.

[[56]] 35. (Currently Amended) A method as defined in claim [[41]] 20, wherein said information system is a network domain.

[[57]] 36. (Currently Amended) A method as defined in claim [[41]] 20, wherein said information system is a file system.

[[58]] 37. (Currently Amended) A method as defined in claim [[41]] 20, wherein said results are evaluated by a JavaScript function accessible by said Web page.

[[59]] 38. (Currently Amended) A method as defined in claim [[58]] 37, wherein the evaluation of said JavaScript function results in a visual alteration of the displayed HTML UI Control. ~~{claims 60-80 intentionally left blank}~~

[[81]] 39. (Currently Amended) A system for retrieving and editing the data structure of a HyperText Markup Language (HTML) UI (User Interface) Control comprising:

means for displaying, at least one HTML UI Control with an associated data structure in at least one Web page within an application window at a client Web browser, said Web browser provided with a Client-Side Data Manager and a Client-Side Proxy;

means for storing the data structure associated with the at least one HTML UI Control of the at least one Web page in a memory;

means for invoking the Client-Side Data Manager to evaluate an event detected at the browser;

means for sending a first request to execute a remote procedure call (RPC) from said Client-Side Data Manager to said Client-Side Proxy in response to said event;

means for executing said RPC over Hypertext Transfer Protocol (HTTP) to generate an HTTP request;

means for transmitting from said Client-Side Proxy to a Server-Side Proxy, said HTTP request containing at least one function name and at least one parameter, wherein a program code of said function names resides at a Server-Side Data Query Engine;

means for executing [[a]] said program code at said Server-Side Data Query Engine to [[a]] query to a remote information system from said Web pages[[s]] based on the evaluation of said at least one function name and, said at least one parameter;

means for ~~returning~~ receiving an HTTP response containing the results of the execution of said query at said Client-Side Proxy in said Web pages[[s]], said HTTP response received through one of an HTML <script> tag and an HTML <iframe> tag corresponding to said HTML "GET" and said HTML "POST" request, respectively;

means for processing said results at said Web pages[[s]] by unpacking the HTTP response at said Client-Side Proxy and passing said results to said Client-Side Data Manager; and

means for editing said data structure using said results;

wherein said transmitting and said receiving actions are accomplished without refreshing said Web page displaying said HTML UI Control with the data structure.

[[82]] 40. (Currently Amended) The system of claim [[81]] 39, wherein said means for storing the data structure associated with at least one HTML UI Control of at least one Web page in a memory comprises:

means for appending data to said data structure stored in said memory.

[[83]] 41. (Currently Amended) The system of claim [[81]] 39, wherein said means for storing the data structure associated with at least one HTML UI Control of at least one Web page in a memory comprises:

means for searching said data structure stored in said memory; and

means for replacing the data of said data structure stored in said memory.

[[84]] 42. (Currently Amended) The system of claim [[81]] 39, wherein said means for executing a query to a remote information system from said Web pages[[s]] comprises:

means for preparing the necessary parameters of ~~a remote procedure call~~said [[(]]RPC[(] to a specified function at a server; [[and]]

means for packaging said RPC as an HTTP request; and

means for executing said specified function at said server.

[[85]] 43. (Currently Amended) The system of claim [[81]] 39, wherein said means for returning the results of said query to said Web pages[[s]] comprises:

means for preparing said results as at least one parameter of a function call; and

means for packaging said results as [[a]]said HTTP response; and

means for returning said HTTP response to said Web pages[[s]].

[[86]] 44. (Currently Amended) The system of claim [[85]] 43, wherein means for preparing said results as at least one parameter of a function call comprises:

means for packaging said results as at least one delimited string.

[[87]] 45. (Currently Amended) The system of claim [[81]] 39, wherein means for processing said results at said Web pages[[s]] comprises:

means for passing said results to at least one function of said Web pages[[s]];

and

means for executing said at least one function[[s]] to process said results.

[[88]] 46. (Currently Amended) The system of claim [[87]] 45, wherein means for executing said functions[[s]] to process said results comprises:

means for parsing at least one delimited string containing said results.